

National Cancer Advisory Board (NCAB)  
*Ad hoc* Subcommittee on Global Cancer Research (GCR)

Hyatt Regency Bethesda Hotel  
1 Bethesda Metro Center  
Bethesda, MD  
June 20, 2016  
4:30 – 6:00 p.m. EDT

DRAFT SUMMARY

Subcommittee Members:

Dr. Olufunmilayo Olopade, Chair  
Dr. Edward Trimble, Executive Secretary  
Dr. David Christiani  
Dr. Marcia Cruz-Correa

NCAB Members:

Dr. Mack Roach III  
Dr. Deborah Bruner

Board of Scientific Advisors (BSA) Members:

Dr. Francis Ali-Osman  
Dr. Carol Ferrans

Other Participants:

Mr. Matthew Brown, National Cancer Institute (NCI)  
Mr. Blake Carlton, National Institutes of Health (NIH)  
Dr. Nelvis Castro, NCI  
Dr. Geraldina Dominguez, NCI  
Dr. Brenda K. Edwards, NCI  
Dr. John Flanigan, NCI  
Dr. Thomas Gross, NCI  
Dr. Douglas Lowy, NCI  
Ms. Catherine Muha, NCI  
Dr. Mark Parascandola, NCI  
Dr. Paul Pearlman, NCI  
Dr. Marie Ricciardone, NCI  
Dr. Jack Welch, NCI  
Dr. Carolyn Fisher, SCG, Rapporteur

**Welcome and Opening Remarks**

Dr. Marcia Cruz-Correa, subcommittee member, sitting in for subcommittee Chair, Dr. Olufunmilayo Olopade, welcomed the meeting participants. The NCAB and BSA members, NCI staff, and other participants introduced themselves.

Dr. Douglas Lowy, Acting Director, NCI, welcomed all the participants and thanked them for attending the meeting.

## **The NCI's Center for Global Health (CGH) Priorities in Global Health**

*Dr. Edward Trimble*

Dr. Edward Trimble, Director, CGH, NCI, updated the subcommittee members on the activities and accomplishments of the CGH. The patterns of cancer differ globally, and based on projected reports published in 2012, the highest increases are expected to be in the low- and middle-income countries (LMIC), where resources are limited. The priorities of the CGH are closely aligned with those of the NCI and include strengthening GCR, building a GCR community, and translating research into practice.

The CGH was founded in 2011 by former NIH director Dr. Harold Varmus to serve as a focal point for NCI GCR. Four NCI offices contributed to the initial budget, and the personnel consisted of staff from multiple offices. The CGH currently is included in the NCI Office of the Director's (OD) budget, which also includes training grants and intramural research. A research program for the CGH was developed by doing a landscape analysis of existing programs and organizing a stakeholder meeting in March 2012—attended by representatives from the NCI, other NIH Institutes and Centers (ICs), and the Centers for Disease Control and Prevention (CDC)—to discuss new and expanded research programs.

### **Highlights of CGH Programmatic Activity**

*Dr. Trimble*

Dr. Trimble provided updates on five activities in which the CGH is engaged.

**Update on Affordable Cancer Technologies.** Dr. Trimble commented that developing affordable cancer technologies addressed all three of the CGH's priorities. Devices were selected that had implications for making an impact on global health. First, the gaps in funding for evaluations of prototypes and commercialization logistics had to be resolved. The request for funding (RFA) established multidisciplinary teams in engineering, oncology, business, and global health. The collaboration spans across the NCI to identify priority areas and manage grants. Two-phased cooperative agreements were generated under the UH2 and UH3 funding mechanisms. Projects funded in phase one include high-resolution micro-endoscopy for imaging of cervical cancer, a GeneXpert human *papilloma* virus (HPV) DNA assay, photodynamic therapy for oral cancer, CyroPop and CyroPen, point-of-care viral load assessment for hepatitis C virus (HCV), and portable imaging of palpable breast masses. The prototypes have been brought in by the investigators for display. Phase two-funded projects include the radiation planning assistant, use of smart phones for molecular cancer diagnostics in Africa, cytology-free point-of-care cervical cancer diagnostics, and low-cost mobile oral cancer screening devices.

**Update on National Case Study: Kenya.** Dr. Trimble pointed out that the initiative began with a request from the Kenyan government for help with cancer control and cancer research. Existing investments from the United States include those of the CDC, U.S. Agency for International Development (USAID), NCI-designated cancer centers, academia, and numerous NIH ICs. However, opportunities still remain to make investments in cancer-related issues of particular interest to Kenya, such as esophageal cancer, Burkitt lymphoma, women's cancer and stigma, and delay in diagnosis to treatment. The CGH convened a national stakeholder meeting with more than 40 organizations and 80 individuals participating across four key technical areas. NCI-Kenya established technical working groups from the ideas generated at the meeting, and the Kenyan government matches the U.S. NCI's investment in cancer registries and surveillance. The CGH has conducted evaluations that show that the efforts put forth have resulted in building research capacity, increased grant submissions, and increased collaboration. The investments in Kenya has had direct effects in all three of the CGH priority areas.

**Update on the Endemic Burkitt Lymphoma Research Network.** Dr. Trimble commented that the NCI has been invested in Burkitt lymphoma since 1968 with the joint NCI-Uganda project led by Dr. John Zeigler, NCI. The cure rate for Burkitt lymphoma in the United States has increased to 90 percent; however, the cure rate remains at 50 percent in Uganda. The objective is to build a Burkitt Lymphoma Research Network to leverage

existing partnerships between the United States and the LMIC. The cooperative agreement funding mechanism (U01) will be used to leverage and maintain crosstalk between extramural and intramural expertise.

**Update on the Asia-Pacific Economic Cooperation (APEC) Cervical Cancer Initiative.** Dr. Trimble briefly described the APEC cervical cancer initiative. APEC was established in 1989 to facilitate economic growth and prosperity and comprises 21 economies bordering the Pacific Ocean, including the United States. Focus shifted to health with the formation of a health working group, committee on trade and investment, and policy partnership on women and the economy. With help from the NCI and Dr. Lowy, the APEC cervical cancer initiative was developed, and the first workshop was organized in China in 2014. APEC participated in a health working group in the Philippines in 2015, and a workshop will be developed in Peru in 2016.

**Update on Cancer and Noncommunicable Diseases (NCDs) Regional Centers of Research Excellence (RCREs).** Dr. Trimble provided an update on the RCREs and commented that the centers were established to encourage communication among cancer centers. A survey of the international activities of the NCI-designated cancer centers reveal significant research and training investments in the LMIC. In Ghana, for example, six U.S. centers, Johns Hopkins University, University of Michigan, Thomas Jefferson University, Vanderbilt University, University of Chicago, and Stanford University all have ongoing cancer-related projects with little communication amongst them. Similar observations were made regarding the United Kingdom (UK), where 18 of their cancer centers were working in Ghana as well.

Dr. Trimble stated that the Academic Model Providing Access to Healthcare (AMPATH) is a model system for building similar structures for the RCREs. AMPATH was established in 1998 between the University of Indiana and the Moi University School of Medicine in Eldoret, Kenya. The overarching principle of AMPATH that each research project must have both a North American and Kenyan principal investigator has led to the program's success, with over 90 active research projects and more than \$83 million in research funding. The NCI has developed funding announcements with input from other NIH ICs and will encourage them to co-sponsor efforts. In addition, the NCI is planning follow-up announcements to strengthen the RCREs and will reach out to other countries as well.

## **Discussion**

Dr. Cruz-Correa commented on the progress that the CGH has made and improved communication across the NCI regarding global health. She asked about metrics and measures for establishing a cohesive community. Dr. Trimble replied that the process of improving communication began by hosting regional interest groups and later moved to broad outreach to NIH ICs and Divisions for input on ways to advance research. The NCI's leadership, Drs. Varmus and Lowy, had recommended early on to convene meetings with the ICs and Divisions that were working in specific areas (e.g., China) to discuss activities that were ongoing. Ms. Catherine Muha, Branch Chief, CGH, NCI added that the center had sponsored Global Research Day in 2015, identified IC liaisons, and held open staff meetings and seminars as part of a plan to improve communication.

In response to a query from Dr. Carol Ferrans, BSA, about the scope of the activities of the CGH, Dr. Trimble commented that the CGH serves to add value to the ongoing work in global health in which many of the ICs are involved. He noted that the CGH focuses primarily on doing what is not being done elsewhere. Dr. Lowy added that all the NCI's global health initiatives do not occur within the CGH, but the center is aware of the other activities and uses its expertise to add value where applicable.

Pathology remains at the forefront for making a diagnosis in low-resource centers in developing countries. Dr. John Flanigan, CGH, discussed pathology activities in which the CGH is involved. The CGH convened a meeting of 50 international pathology experts to discuss strategies in training, quality assurance, and new technologies. Center staff collaborated on a chapter in the third edition of *Disease Control Priorities*. The CGH also participated in the 2016 Pathology Informatics Summit. Center staff is providing insight on streamlining synoptic reporting to initiatives sponsored by the College of American Pathologists and the Union for

International Cancer Control. In addition, the center is developing ways to increase the use of molecular diagnostic technology in global health.

Dr. Trimble cited developing channels to better engage the NCI-designated cancer centers and professional organizations, as well as developing ideas for recruiting the next generation of global cancer researchers, as ways in which the NCAB could help the CGH. Dr. Flanigan described current CGH initiatives for engaging new researchers, including sharing support for 1- and 2-year career development awards with the Fogarty International Center (FIC), participating in the FIC fellows and postdoctoral program, and helping develop the NCD young investigators network. The NCD young investigator network had conceptualized the idea of centers for excellence as core facilities in developing countries. Dr. Francis Ali-Osman, BSA, suggested sponsoring short-term training programs as a recruitment strategy. Dr. Flanigan shared that the CGH had awarded supplements under the P30 funding mechanism to support training. The group that the CGH helped to establish, African Strategies for Advancing Pathology, is very supportive of training.

Dr. Lowy provided additional insight on ways the NCAB could help the CGH by pointing out the many demands on the NCI's resources and reviewing the investments in global health that are separate initiatives from the CGH. Leveraging existing long-term efforts to sustain research and health (e.g., China's presence in Africa) provides added value. In addition, engaging other federal entities that have significant outreach outside the United States to establish partnerships to increase national programs will have significant effects on global health. Dr. Olopade suggested that the NCAB could best help the CGH by continuing to be an advocate for GCR and bring the need for more funding and resources to the attention of the NCI and NIH.

Dr. Deborah Bruner, NCAB, commented on the achievements of the CGH and asked about the priorities going forward and the metrics that will be used to measure impacts. Dr. Thomas Gross, Deputy Director of Science, CGH, suggested prioritizing activities in pediatric cancer and provided the following reasons: incidence is higher in developing countries; political motivation is high; most can be cured without overly expensive interventions; and treating patients can be used to build infrastructure for surgery and pathology. He pointed out that building sustainable health may involve leveraging existing partnerships, which might preclude initially addressing the larger need. Dr. Trimble emphasized the importance of focusing on programs that have measurable interventions, such as tobacco control, and described the ongoing collaborative efforts with the World Health Organization (WHO) and others to develop metrics.

Ms. Muha described the CGH regional prioritization and strategic planning processes. Each region (e.g., Latin America, China) has a program lead to assess strengths and accomplishments, provide input on new technologies and initiatives, and develop a 2-year strategic plan. Dr. Cruz-Correa commented on the intersection of the CGH priorities with the WHO, other governmental entities, and global health research to promote sustainability. Dr. Trimble expressed gratitude to the subcommittee; NCAB and BSA members, including Dr. Mack Roach III, NCAB, who has worked with the International Atomic Energy Agency (IAEA); Dr. Olopade, with the African Organization for Research and Training in Cancer (AORTIC) for providing opportunities and using their influence in the activities of the CGH.

Dr. Brunner asked about strategically organizing meetings with NCI-designated cancer centers to discuss such procedures and processes as providing specimens for research in the global landscape and institutional review board (IRB) requirements. Dr. Trimble commented that issues regarding biospecimens and shipping to other countries apply to the NIH in general. He noted efforts by the National Institute of Allergy and Infectious Diseases (NIAID) and agreed that convening a meeting would be helpful. Dr. Lowy emphasized the need for a standardized set of high-quality samples from the United States for global health research projects. Dr. Olopade proposed the Annual Symposium on Global Cancer Research, which NCI co-sponsors, as an opportunity to discuss biospecimens and the issues of shipping samples. Dr. Gross suggested that identifying a local (i.e., international) champion and building relationships from local investments might be strategies for addressing the issues of biospecimens and shipping to other countries.

The opportunity exists for the Vice President's Cancer Moonshot Initiative to have a global outreach component, and efforts are underway to engage the Republic of Korea, among others. Two of areas research are being proposed: (1) "omics" for cancers that are important internationally and (2) assistance for global health research.

Dr. Olopade suggested that engaging developing countries to establish sustainable research programs and partner with the NCI will accelerate progress in GCR. The opportunity exists to leverage existing platforms and resources, build innovation into the platforms, and compel research forward.

Dr. Geraldina Dominguez, NCI, shared updates on collaborative consortia for the study of HIV-associated cancers and low- and middle-income country partnerships.

Dr. Trimble commented that in light of the recent changes in diplomatic relations between the United States and Cuba, identifying approaches to engage Cuba in research would be a strategic way that the NCAB could help the CGH. Dr. Gross described his recent visit to Cuba to tour their research facilities. He noted that the motivations and strategies in Cuba differ from those of the United States. Dr. Roach pointed out that Cuba's differences are primarily a result of political factors. Members collectively commented on the Cuban training system as providing a good model. Reaching out to sponsor professional meetings would be one strategy to engage the Cuban research community.

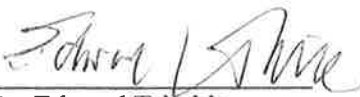
#### **Adjournment**

Dr. Olopade shared that this would be her last subcommittee meeting and emphasized the importance of the NCI maintaining and further expanding its investment in GCR. The subcommittee meeting adjourned at 6:14 p.m. EDT.

  
Dr. Olufunmilayo Olopade  
Chair

Date

6/21/2016

  
Dr. Edward Trimble  
Executive Secretary

Date

6/21/16